

What is claimed is:

1 A soft tissue implant material comprising biologically-compatible polymeric particles  
 2 having intraparticulate pores, said pores having dimensions effective to permit soft tissue  
 3 to grow therein.

1 2. Implant material of claim 1 wherein said particles have a diameter of up to about 500  
 2 microns.

3 3. Implant material of claim 2 wherein said particles have a diameter of about 50 to about 200  
 4 microns.

1 4. Implant material of claim 1 wherein said particles have interstices therebetween, said  
 2 interstices having dimensions effective to permit soft tissue to grow therein.

1 5. Implant material of claim 1 wherein said pores comprise between about zero and about 60  
 2 percent of said implant material.

1 6. Implant material of claim 5 wherein said pores comprise between about 40 and about 60  
 2 percent of said implant material.

1 7. Implant material of claim 1 wherein said pores have a size of less than about 100 microns.

1 8. Implant material of claim 7 wherein said pores have a size of between about 50 and about  
2 100 microns.

1 ~~9. Implant material of claim 1 further comprising collagen.~~

1 10. Implant material of claim 9 wherein said collagen comprises between about 30% and about  
2 65% of said implant material by volume.

1 11. Implant material of claim 10 wherein said collagen comprises about 50% of said implant  
2 material by volume.

1 12. Implant material of claim 9 wherein said collagen comprises injectable collagen.

1 13. Implant material of claim 1 wherein said particles have an inner core comprised of a first  
2 biologically-compatible polymeric material and an outer layer generally surrounding said  
3 inner core, said outer coating comprised of a second biologically-compatible polymeric  
4 material, said second polymeric material being hydrophilic and having a composition  
5 different from the composition of said first polymeric material.

1 14. Implant material of claim 13 wherein said first polymeric material is an acrylic polymer.

1 15. Implant material of claim 14 wherein said first polymeric material is  
2 polymethylmethacrylate.

1 16. Implant material of claim 13 wherein said second polymeric material is a polymeric  
2 hydroxyethylmethacrylate.

1 17. Implant material of claim 16 wherein said polymeric hydroxyethylmethacrylate comprises  
2 a copolymer of monomeric hydroxyethylmethacrylate and a cross-linking agent.

1 18. ~~Implant material of claim 1 further comprising at least one bioactive substance.~~

1 19. Implant material of claim 18 wherein said at least one bioactive substance is grafted to said  
2 biologically-compatible particles.

1 20. ~~Implant material of claim 13 further comprising a coating of calcium hydroxide on said~~  
2 ~~outer layer.~~

1 21. A method of augmenting soft tissue comprising:

- 2 a. providing a biologically-compatible implant material comprised of biologically  
3 compatible polymeric particles; and  
4 b. ~~implanting said implant material within soft tissue.~~

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1 22. Method of claim 21 wherein said implanting step includes the step of injecting said implant  
2 material.

1 23. Method of claim 22 wherein said injecting step includes injecting said implant material  
2 subcutaneously into an area having a soft tissue contour defect in an amount sufficient to at  
3 least partially remove said defect.

1 24. Method of claim 23 wherein said soft tissue contour defect comprises wrinkles.

1 25. Method of claim 23 wherein said soft tissue contour defect includes gingival soft tissue  
2 defects in the mouth.

1 26. Method of claim 22 wherein said injecting step includes injecting said material into the  
2 sphincter surrounding the urethra in an amount sufficient to at least partially constrict said  
3 urethra.

1 27. Method of claim 26 wherein said injecting step includes injecting between about 2 cc and  
2 about 4 cc of said implant material.

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1 28. Method of claim 21 wherein said particles have a diameter of up to about 500 microns.

1 29. Method of claim 28 wherein said particles have a diameter of about 50 to about 200  
2 microns.

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1 30. Method of claim 21 wherein said particles have intraparticulate pores, said pores having  
2 ~~dimensions effective to permit soft tissue to grow therein.~~

1 31. Method of claim 30 wherein said pores comprise between about zero and about 60 percent  
2 of said material.

3 32. Method of claim 31 wherein said pores comprise between about 40 and about 60 percent of  
4 said material.

5 33. Method of claim 30 wherein said pores have a size of less than about 100 microns.

6 34. Method of claim 33 wherein said pores have a size of between about 50 and about 100  
7 microns.

8 35. Method of claim 21 wherein said particles have interstices therebetween, said interstices  
9 ~~having dimensions effective to permit soft tissue to grow therein.~~

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d1

1 36. Method of claim 21 wherein said particles have an inner core comprised of a first  
2 biologically-compatible polymeric material and an outer layer generally surrounding said  
3 inner core, said outer coating comprised of a second biologically-compatible polymeric  
4 material, said second polymeric material being hydrophilic and having a composition  
5 different from the composition of said first polymeric material.

1 37. Method of claim 36 further comprising a coating of calcium hydroxide on said outer layer.

1 38. Method of claim 36 wherein said first polymeric material is an acrylic polymer.

1 39. Method of claim 38 wherein said first polymeric material is polymethylmethacrylate.

1 40. Method of claim 36 wherein said second polymeric material is a polymeric  
2 hydroxyethylmethacrylate.

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c1

1 41. Implant material of claim 40 wherein said polymeric hydroxyethylmethacrylate comprises  
2 a copolymer of monomeric hydroxyethylmethacrylate and a cross-linking agent.

1 42. Method of claim 21 wherein the step of providing a biologically compatible implant  
2 material further comprises combining said particles with a matrix material.

1 43. Method of claim 42 wherein said matrix material comprises a volume of between about  
2 30% and about 65% of the volume of said implant material.

1 44. Method of claim 43 wherein said matrix material comprises a volume of about 50% of the  
2 volume of said implant material.

1 45. Method of claim 42 wherein said matrix material is selected from the group consisting of  
2 sterile water, saline solution, adipose tissue, blood, glucose, hyaluronic acid, and collagen.

1 46. Method of claim 45 wherein said matrix material comprises collagen.

1 47. Method of claim 46 wherein said collagen comprises injectable collagen.

1 48. Method of claim 21 wherein the step of providing a biologically compatible implant  
2 material further comprises the step of combining said particles with at least one bioactive  
3 substance.

1 49. Method of claim 48 wherein the combining step includes grafting said at least one  
2 bioactive substance to said particles.